SOLID EDGE
VELOCITY SERIES

Tutorial: ***Assembly***

Project: ***Roadroller (Synchronous)***

cad / cam / pdm / cae | CAAP®

Solution Partner PLM | SIEMENS

ITEM	NUMBER	TITEL	MATERIAL	DOCUMENT NR.	REV.	FILENAME
9	2	Rear Wheel	Steel	1006	A	Roadroller-1006-Rear wheel-A.par
8	1	Rear Axis	Steel	1007	A	Roadroller-1007-Rear Axis-A.par
7	1	Roof	Steel	2002	A	Roadroller-2002-Roof-A.psm
6	1	Roller	Steel	1001	A	Roadroller-1001-Roller-A.par
5	1	Front Axle	Steel	1002	A	Roadroller-1002-Front Axle-A.par
4	1	Steering Bracket	Steel	2001	A	Roadroller-2001-Steering Bracket-A.psm
3	1	Steampipe	Steel	1004	A	Roadroller-1004-Steampipe-A.par
2	1	Boiler	Steel	1003	A	Roadroller-1003-Boiler-A.par
1	1	Cab	Steel	1005	A	Roadroller-1005-Cab-A.par

AMERICAN PROJECTION

SCALE : 1:2
DIMENSION UNITS : MM
DATE : 22-8-2011

AUTHOR : Ruben
CLASS (DEPARTMENT) : -
CHECKED BY : -

Hamersweldseweg 65
3833 GL Leusden
+31(0)33-4573322
www.caap.nl

MATERIAL :
PROJECT: Roadroller

TITEL : Assembly
NUMBER : 3001
REV: A
SIZE: A4

1	1. Start **Solid Edge.** 2. Click on **<u>ISO Assembly.</u>** 	
2	1. Click on the **Parts Library**. 2. Browse to the folder **Roadroller**.	
3	1. Drag the **Roadroller-1005-Cab-A.par** file in the Assembly.	

4	1. Drag the **Roadroller-1003-Boiler-A.par** file in the Assembly.	
5	The part can be assembled. 1. When you hover over a plane, it will turn red. Click on the plane of the boiler, as shown. ***Hint:*** *Selected the wrong plane? Click the RMB to deselect.*	
6	1. Turn the view. 2. When you hover over a plane, it will turn red. Click on the plane of the cab, as shown. ***Hint:*** *How to turn the view? Hold the scroll wheel and move the mouse.*	

7	2. Click on the cylinder of the boiler. ***Hint:*** *Point the cursor at the plane. Wait until the icon appears and click the RMB. Select the plane in the QuickPick.*	
8	3. Click the cylinder of the cab.	
9	1. Turn the view. 2. Click the bottom plane of the boiler. 3. Click on the bottom plane of the cab.	

10	Now the assembly looks like this:	
11	1. Drag the **Roadroller-1004-Steampipe-A.par** file in the Assembly.	
12	1. Click the cylinder of the steam pipe. 2. Click the cylinder of the steam boiler.	

13	If the steam pipe is turn up-side-down: 3. Click the **Flip** button. 	
14	4. Click the **Lock Rotation** button.	
15	5. Select and click the steam pipe plane, as shown. 6. Click the boiler plane.	

16	1. Drag the **Roadroller-2001-Steering Bracket-A.par** file in the Assembly.	
17	1. Turn the view. 2. Click on the **Hole** in the Steering Bracket. 3. Click the steam pipe cylinder, as shown.	
18	4. Click the steering bracket plane. 5. Click the plane of the cylinder, as shown. 6. Click the **Select** button. 7. Press **Ctrl + i** to turn the view.	

19	1. Drag the **Roadroller-1002-Front Axle-A.par** file in the Assembly.	
20	1. Turn the view. 2. Click the front axle **Hole**. 3. Click the steering bracket **Hole**. 4. Click the **Lock Rotation** button.	
21	Now we will align the front axle. 1. Click the **Select** button. 2. Click the RMB on the **Roadroller-1002-Front Axle-A.par** file in the PathFinder. 3. Select **Show/Hide Component**.	

22	4. Select at Reference Planes **On**. 5. Click the **OK** button.	
23	6. Repeat step 22 to turn on the Steering Bracket Reference Plane.	
24	1. Click the **Assemble** button. 2. Click the Front Axle **Reference Plane**. 3. Click the Steering Bracket **Reference Plane**.	

25	Now we turn off the Reference Planes. 1. Repeat step 22 to turn off the Reference planes of the Front Axle and the Steering Bracket.	
26	1. Drag the **Roadroller-1001-Roller-A.par** file in the Assembly.	
27	1. Click the cylinder of the roller. 2. Click on the cylinder of the front axle.	

28	Now we will align the roller. 1. Repeat step 22 to turn on the Reference planes at the Roller and Front Axle.	
29	1. Click the **Assemble** button. 2. Click the **Reference Plane** of the Roller. 3. Click the **Reference Plane** of the Front Axle.	
30	Now we turn off the **Reference Planes**. 1. Repeat step 22 to turn off the Reference planes of the Front Axle and Roller.	

31	1. Drag the **Roadroller-2002-Roof-A.par** file in the Assembly.	
32	1. Turn the view. 2. Click the plane of the roof. 3. Press **Ctrl + i** to turn the view. 4. Click the plane of the cab.	
33	Now we will align the roof. 1. Repeat step 22 to turn on the Reference planes of the Roof.	

34	1. Click the **Assemble** button. 2. Click the **Reference Plane** of the roof. 3. Click the **Reference Plane** of the cab.	
35	If the **Assemble** is still active. 1. Click on the other **Reference Plane** of the roof. 2. Click on the other **Reference Plane** of the assembly.	
36	Now we turn off the Reference Planes. 1. Repeat step 22 to turn off the Reference planes of the Front Axle and Roller.	

37	1. Drag the **Roadroller-1009-Rear Axis-A.par** in the Assembly.	
38	1. Click on the cylinder of the rear axis. 2. Click on the cylinder of the cab.	
39	Now we will align the rear axis. 1. Repeat step 22 to turn on the Reference planes of the Rear Axle and Cab.	

40	1. Click the **Assemble** button. 2. Click on the **Reference Plane** of the Rear Axis. 3. Click the **Reference Plane** of the cab.	
41	Now we turn off the Reference Planes. 1. Repeat step 22 to turn off the Reference planes of the Rear Axle and Cab.	
42	1. Drag the **Roadroller-1006-Rear Wheel-A.par** file in the Assembly.	

43 + 	1. Click the cylinder of the Rear Wheel. 2. Click on the cylinder of the Rear Axis. 3. Click the **Rotation Lock** button.	
44 	If the **Assemble** is still active. 1. Click on the plane of the Rear Wheel, as shown. 2. Click the plane of the Rear Axis, as shown. ***Hint:*** *Point the cursor at the plane. Wait until the icon appears and click the RMB. Select the plane in the QuickPick.*	
45 	The part is ready. 1. Click the **Select** button. 2. Press **Ctrl + i** to turn the view.	

46	Repeat step 42 till 46 to assemble the second wheel. Use the **Flip** button to turn the wheel. 	
47	Now we set the File properties. 1. Click the **Application Button**. 2. Click on **Properties**. 3. Click the **File Properties**.	
48	1. Go to the **Summary** tab. 2. Type *Assembly* at Title. 3. Go to the **Project** tab and fill in the following properties: Document Number*: 3001*. Revision Number*: A*. Project Name: *Roadroller*. 4. Click **OK** to close the screen. ***Hint:*** *All properties of the part are saved at the **File Properties**. These properties will be used by making a drawing or part list.*	

49	Save the file. 1. Browse to the folder *Roadroller*. 2. Save the document by name *Roadroller-3001-Assembly-A.par*. 3. Click the **Save** button. 4. Close the file. ***Hint:*** *Save all files of one project in the same folder.*	